In Memoriam, Floris Takens 1940–2010

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Preface

This double issue of Indagationes Mathematicae is devoted to Floris Takens (1940–2010) who passed away in June 2010 and who was an active member of the Royal Academy of Arts and Sciences (KNAW) for almost 20 years. Floris Takens will be remembered as a brilliant mathematician who was at the cradle of the modern area of nonlinear dynamical systems. His origins were in differential topology, where he obtained his Ph.D. in 1969. This background made him perfectly equipped to thrive in the emerging field of 'dynamical systems', joining a development initiated by founding fathers such as René Thom, Stephen Smale and Christopher Zeeman. His fundamental contributions were in the broad area of hyperbolicity and bifurcations. One of the key concepts of the entire development, introduced in 1971 by David Ruelle and Floris Takens, was that of 'strange attractor', later also called 'chaotic attractor'. Takens has had a long-standing working relationship with Jacob Palis, who has contributed to this volume. Around 1980 he extended the already formidable scope of his research by introducing the 'reconstruction theory', which opens the way to reconstruct (strange) attractors from time-signals. The latter theory was applied very successfully in chemical process technology and in other areas of science. Floris Takens has been the successful advisor of around 20 Ph.D. students; both the undersigned consider themselves extremely fortunate to belong to this group.

This volume goes some way towards acknowledging the huge legacy left by Floris. The first contribution is a biography of his life, the next two are personal eulogies by friends and collaborators. The remaining contributions reflect the breadth of Floris' mathematical life.

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Contents